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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/412,822	10/05/1999	JEFFREY C. REYNAR	13237-2475	1159

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EXAMINER
BASHORE, WILLIAM L

ART UNIT	PAPER NUMBER
2176	7

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	**Applicant(s)**
Office Action Summary	09/412,822	REYNAR ET AL.
	Examiner	**Art Unit**
	William L. Bashore	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/3/2003*.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,17,18 and 21-27* is/are rejected.

7)☒ Claim(s) *15-16, 19-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

1.   This action is responsive to communications: amendment filed 11/3/2003, to the original application

filed 10/5/1999, IDS filed 2/20/2003 as paper 4.

2.   The rejection of claims 15, 16, 19, 20 under 35 U.S.C. 103(a) as being unpatentable over Word 97 and

Karaali has been withdrawn as necessitated by amendment.

3.   Claims 1-14, 17-18, 21-27 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Word 97

and Karaali.

4.   Claims 1-27 are pending. Claims 1, 21 are independent.

Allowable Subject Matter

5.   Claims 15, 16, 19, 20 are objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including all of the limitations of the base claim and any intervening

claims.

Claim Rejections - 35 USC § 103

6.   **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness**

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
> of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was
> made.

7.   Claims 1-14, 17-18, 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Microsoft Word 97 (hereinafter Word 97), 1996 Microsoft Corporation, screenshots pp. 1-11, in view of

Karaali et al. (hereinafter Karaali), U.S. Patent No. 6,182,028 issued January 2001.

        In regard to independent claim 1, Word 97 teaches an electronic text editor capable of correcting text

(Word 97 pages 1-4; compare with claim 1 *"A computer-implemented method for correcting text, comprising the*

steps of:").

        Word 97 teaches receiving an editable text selection of a plurality of words (text components) (Word 97

page 2). The first input source originates from opened file "Helloo World.doc" (Word 97 page 10). The second

input source results from user input regarding editing of content (i.e. an input buffer – present for editing a

document via keyboard) (compare with claim 1 *"receiving a text selection comprising a plurality of text*

components derived from different input sources").

        Word 97 teaches a sentence "This item are free" corrected to read "This item is free", the pop-up

window showing various suggestions, the first suggestion adopted for said correction (Word 97 pages 7-9).

Word 97 does not specifically teach said adopted suggestion as a derived stochastic input source. However,

Karaali teaches part-of-speech disambiguation of words based on hybrid neural-network and stochastic

processing (Karaali Abstract, also column 2 lines 58-67 to column 3 lines 1-5; compare with claim 1 *"wherein*

at least one of the text components comprises a stochastic text component derived from a stochastic input source

or a series of stochastic input sources"). It would have been obvious to one of ordinary skill in the art at the time

of the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word

97 the benefit of stochastic analysis for more accurate suggestions.

        Word 97 teaches right clicking a problem word/phrase, resulting in a pop-up menu of suggestions

(alternative words/phrases) (Word 97 pages 3, 8; compare with claim 1 *"receiving a command to display*

alternatives for the text selection").

Word 97 does not specifically disclose parsing text into text components, as claimed. However, Word 97 teaches alternative suggestions comprising itemized words taken from an original sentence (Word 97 page 8), hence providing the claimed equivalent of parsing text into itemized components, providing the benefit of parsing for analyzation purposes (compare with claim 1 *"parsing the text selection into the text components"*).

Word 97 teaches multiple text components (Word 97 page 8). Word 97 does not specifically teach usage of a stochastic model and combining said model with said present text components. However, Karaali teaches evaluating words and tags using a stochastic part-of-speech disambiguator model (Karaali Abstract, also column 2 lines 32-36, Figure 5, column 3 lines 5-15; compare with claim 1 *"retrieving a stochastic model for the stochastic text component....or series of input sources."*, and *"combining the stochastic model....for the text selection"*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word 97 the benefit of stochastic analysis for more accurate suggestions.

Word 97 teaches displaying a list of alternatives (Word 97 pages 3, 8; compare with claim 1 *"displaying the list of alternatives for the text selection on a display device."*).

In regard to dependent claims 2, 3, Word 97 teaches editing a phrase, and selecting from a list of alternative selections (Word 97 page 2-4, 7-9).

In regard to dependent claim 4, claim 4 incorporates substantially similar subject matter as claimed in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 teaches editing a phrase in a word processor environment (Word 97 page 2,7).

In regard to dependent claim 5, Word 97 teaches a document editor (Word 97 pages 1-2).

In regard to dependent claims 6, 7, claims 6, 7 incorporate substantially similar subject matter as claimed in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 does not specifically disclose ranking alternatives, as claimed. However, Word 97 teaches display of a number of alternative suggestions, with its best suggestion listed at the top of the list (Word 97 pages 3, 8), providing the claimed equivalent of ranking alternatives in probable order, providing Word 97 the benefit of providing its best suggestions in the most convenient list positions.

In regard to dependent claim 8, claim 8 incorporates substantially similar subject matter as claimed in claim 1, and in further view of the following, is rejected along the same rationale.

Word 97 does not specifically teach a natural language model, or of revised interim lists. However, Karaali teaches application of both rules for disambiguation of text based upon local context, and of a stochastic model (Karaali column 3 lines 5-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word 97 the benefit of stochastic/natural language analysis for more accurate suggestions.

In regard to dependent claims 9-11, claims 9-11 incorporate substantially similar subject matter as claimed in claims 1, 8, and are rejected along the same rationale.

In regard to dependent claim 12, Word 97 does not specifically teach a latrtice/metalattice. However, Karaali teaches a disambiguator utilizing a lattice of tag sets (Karaali column 5 lines 5-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali to Word 97, providing Word 97 the benefit of lattices for more accurate analysis.

In regard to dependent claim 13, Word 97 does not specifically teach a latrtice/metalattice, as well as n-best candidates. However, Karaali teaches a disambiguator utilizing a lattice of tag sets (Karaali column 5

lines 5-10), as well as n-element Boolean vectors (Karaali column 7 lines 21-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali to Word 97, providing Word 97 the benefit of lattices and Boolean vectors for more accurate analysis.

In regard to dependent claim 14, Word 97 does not specifically teach a series. However, Karaali teaches a disambiguator utilizing two disambiguating operations of the inputted data (Karaali column 3 lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali to Word 97, providing Word 97 the benefit of a series of analysis for more accurate analysis.

In regard to dependent claim 17, a computer readable medium for storing instructions (i.e. diskette, hard drive, etc.), is well known in the computer art, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize said medium for storing said instructions, providing the benefit of storage for later use.

In regard to dependent claim 18, reference Word 97 pages 1-11 comprise screenshots from an active session of Microsoft Word 97 running on a computer.

In regard to independent claim 21, Word 97 teaches an electronic text editor capable of correcting text (Word 97 pages 1-4; compare with claim 21 *"A computer-implemented method for correcting text, comprising the steps of:"*).

Word 97 teaches receiving an editable text selection of a plurality of words (text components) (Word 97 page 2; compare with claim 21 *"receiving a text selection comprising a plurality of text components derived from different input sources"*).

Word 97 teaches right clicking a problem word/phrase, resulting in a pop-up menu of suggestions (alternative words/phrases) (Word 97 pages 3, 8; compare with claim 21 *"receiving a command to display alternatives for the text selection"*).

Word 97 teaches an inputted sentence "This item are free" corrected to read "This item is free", the pop-up window showing various suggestions comprising adjacent words, the first suggestion adopted for said correction (Word 97 pages 7-9). Word 97 does not specifically teach usage of a correction scope model. However, Karaali teaches part-of-speech disambiguation of words based on hybrid neural-network and stochastic processing, said models used for determining the scope of change required for text correction (Karaali Abstract, also column 2 lines 58-67 to column 3 lines 1-5; compare with claim 21 *"submitting the text selection to a correction scope model to determine if a scope of correction should be adjusted"*, and *"if the correction scope model determines the scope of correction should be adjusted, then receiving from the correction scope model a text unit....one adjacent word"*). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali's method to Word 97's pop-up suggestion phrases (Word 97 page 8), providing Word 97 the benefit of scope analysis for more accurate suggestions.

Word 97 teaches right clicking a problem word/phrase, resulting in a pop-up menu of suggestions (alternative words/phrases) (Word 97 pages 3, 8; compare with claim 21 *"producing a list of alternatives for the text unit"*).

Word 97 teaches displaying a list of alternatives (Word 97 pages 3, 8; compare with claim 21 *"displaying the list of alternatives for the text unit on a display device."*).

In regard to dependent claim 22, Word 97 teaches editing a phrase, and selecting from a list of alternative selections (Word 97 page 2-4, 7-9).

In regard to dependent claim 23, Word 97 teaches an inputted phrase "This item are free" (Word 97 page 8). In this example, the word "This" is incorrectly spelled because of a related grammar error regarding the

adjacent word "item" ("item" should be plural due to the word "are"). If the user picks the second suggestion "These items are...", then words "This", and "item" are corrected.

In regard to dependent claim 24, Word 97 teaches a model of likely (grammar related) errors (Word 97 page 11).

In regard to dependent claim 25, Word 97 does not specifically disclose parsing text into text components, as claimed. However, Word 97 teaches alternative suggestions comprising itemized words taken from an original sentence (Word 97 page 8), hence providing the claimed equivalent of parsing text into itemized components, providing the benefit of parsing for analyzation purposes.

Word 97 teaches multiple text components (Word 97 page 8). Word 97 does not specifically teach usage of a stochastic model and combining said model with said present text components. However, Karaali teaches evaluating words and tags using a stochastic part-of-speech disambiguator model (Karaali Abstract, also column 2 lines 32-36, Figure 5, column 3 lines 5-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Karaali's method to Word 97's pop-up suggestions (Word 97 page 8), providing Word 97 the benefit of stochastic analysis for more accurate suggestions.

Word 97 teaches displaying a list of alternatives (Word 97 pages 3, 8).

In regard to dependent claim 26, a computer readable medium for storing instructions (i.e. diskette, hard drive, etc.), is well known in the computer art, therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize said medium for storing said instructions, providing the benefit of storage for later use.

In regard to dependent claim 27, reference Word 97 pages 1-11 comprise screenshots from an active session of Microsoft Word 97 running on a computer.

8.   **Prior art made of record and not relied upon is considered pertinent to disclosure.**

Golding   U.S. Patent No. 5,659,771   issued   08-1997

Response to Arguments

9.   Applicant's arguments filed 11/3/2003 have been fully and carefully considered but they are not

persuasive.

Applicant argues on page 9-11 of the amendment that Word 97 does not specifically teach the

limitations of claim 1, but instead, teaches spell correction via referencing a dictionary and grammar checker. It

is respectfully noted that the examiner does not specifically rely upon Word 97's dictionary lookup to teach said

claims. Although an embodiment of Word 97 appears to involve the use of a dictionary lookup, the examiner

relies upon Karaali to teach spell/grammar correction via the use of a stochastic algorithm. The examiner

integrates the stochastic algorithm of Karaali to Word 97's spell/grammar correction method, so that Word 97's

spell/grammar checking accuracy is enhanced.

Instant representative claim 1 recites receiving a plurality of text components from fifferent input

sources. It is respectfully submitted that Word 97 can receive input for correction via the opening of a document

file, or by a text input buffer (i.e. Word 97's correction method can be applied to an opened file from storage, or

to a document created on the fly using input via keyboard).

Applicant argues on pages 10-12 of the amendment that the combination of Word 97 and Karaali do not

teach the claimed limitations. It is respectfully submitted that Karaali teaches "disambiguating" (i.e. correcting),

parts of speech errors within a document using a stochastic model. Karaali's use of tags does not obviate the fact

that Karaali's method results in grammatically corrected text. In addition, Karaali's stochastic processing model

is used for determining the scope of change required for text correction, which can be reasonably interpreted as

a "scope correction model".

Conclusion

10.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth

in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the

mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this

final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no

event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this

final action.

11.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to William Bashore whose telephone number is **(703) 308-5807.** The examiner can

normally be reached on Monday through Friday from 11:30 AM to 8:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Joseph Feild, can be reached on **(703) 305-9792.**

Any inquiry of a general nature or relating to the status of this application should be directed to the

Group receptionist whose telephone number is **(703) 305-3900.**

12. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703-872-9306) (for formal/after-final communications intended for entry)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (Receptionist).

SANJIV SHAH
PRIMARY EXAMINER

William L. Bashore
Patent Examiner, AU 2176
January 16, 2004